Surface Rescue Swimmer School

Primary Rescue Devices and Procedures

LT 4.3

ENABLING OBJECTIVES

Explain the functional operation of the following Rescue Devices per NTTP 3-50.1:

- Double Rescue Hook
- Modified Rescue Strop
- Rescue Litter/ SAR MEDEVAC Litter, Trail line and Gloves

ENABLING OBJECTIVES

- Demonstrate procedures for placing a survivor into the following rescue devices in a water environment:
  - Double Rescue Hook
  - Modified Rescue Strop
  - Rescue Litter/ SAR MEDEVAC Litter
  - Rescue Litter Sling Assembly

COMMUNICATION PROCEDURES

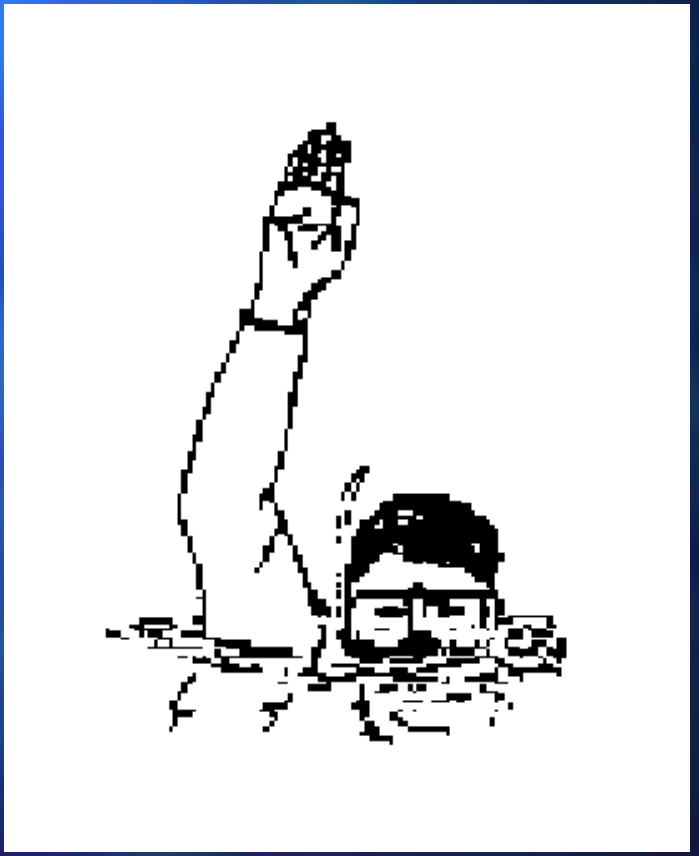
- Efficient communications keeps ship, boat crew, deck crew, and swimmer aware of a developing rescue situation and allows rescue platform to provide needed support to swimmer (i.e.: deployment of rescue devices).
- The radio offers an optimal secondary means of communications.

COMMUNICATION PROCEDURES

- Hand signals are the primary means of communication between rescue swimmer and the rescue platform in a maritime environment.
- All crewmembers must be familiar with the meaning of standard hand signals.

HAND SIGNALS

- I am all right
  (Raised arm, open hand, fingers extended).

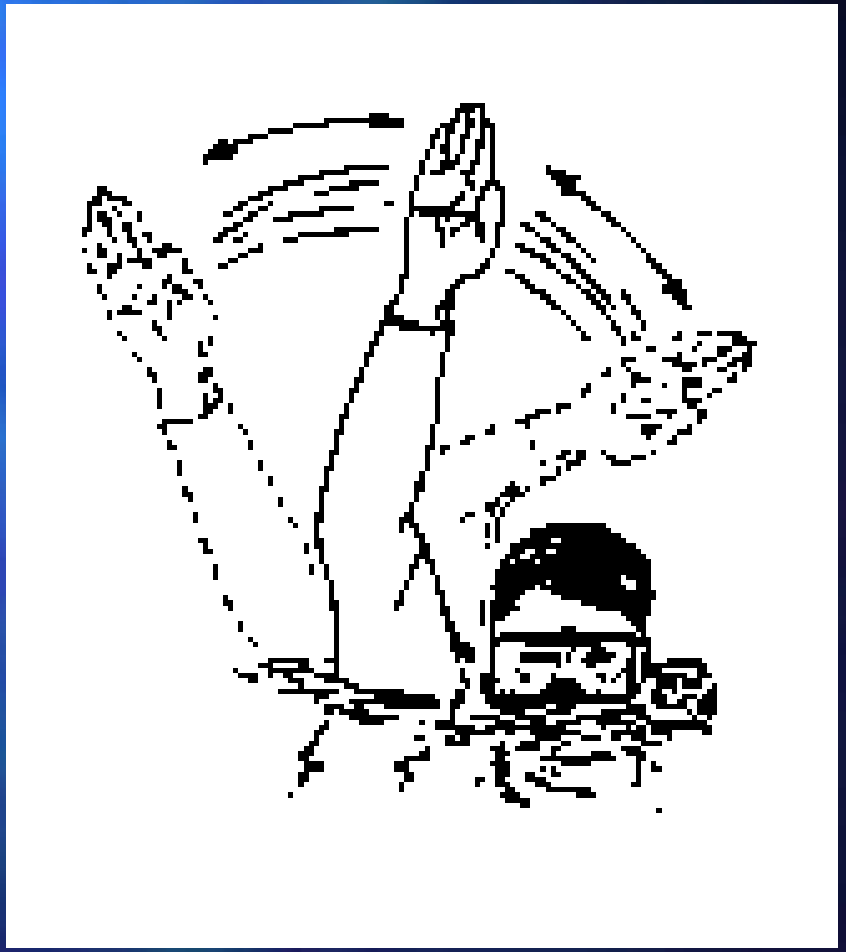


HAND SIGNALS

- Move in for pickup
  - Raised arm, thumb up.

HAND SIGNALS

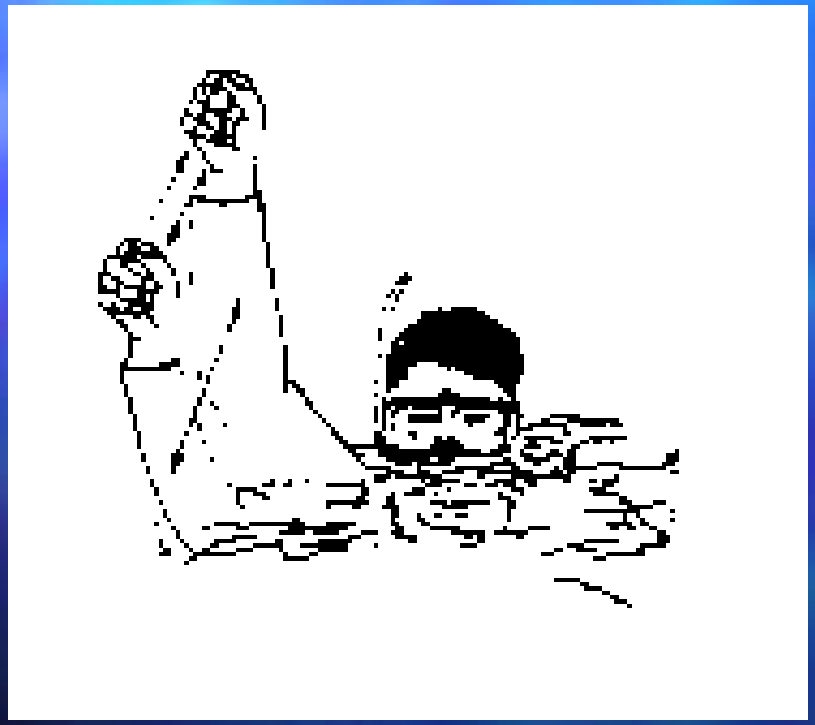
- In trouble, need assistance - Vigorous waving of one arm.



HAND SIGNALS

- Deploy Raft
  -Clenched fists, arms crossed overhead.

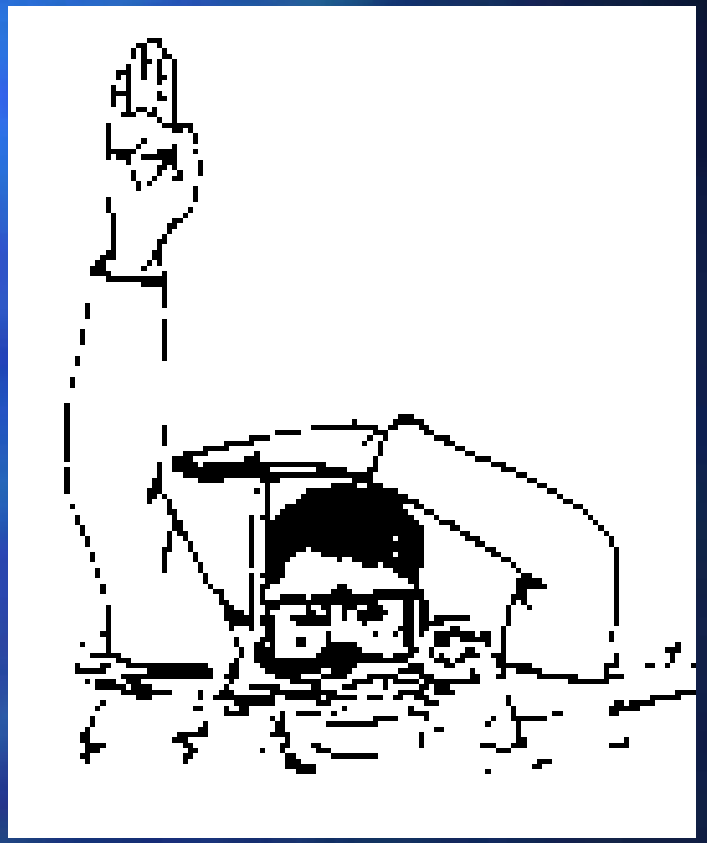
HAND SIGNALS



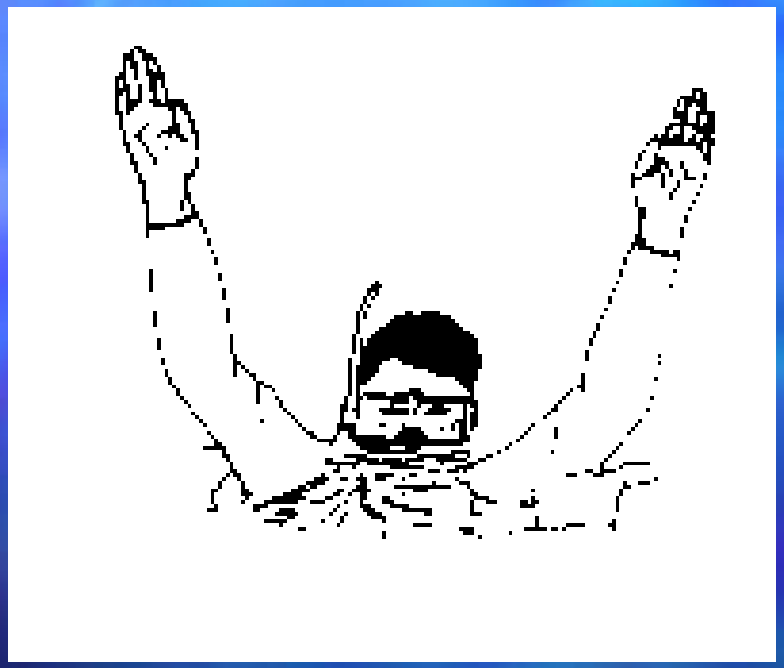
- Deploy Pneumatic Webbing Cutter - Clenched fist, arm pumping motion

HAND SIGNALS

- Deploy Rescue Litter - One arm raised with open palm, fingers extended over the swimmer's head and touching the first arm at the elbow.



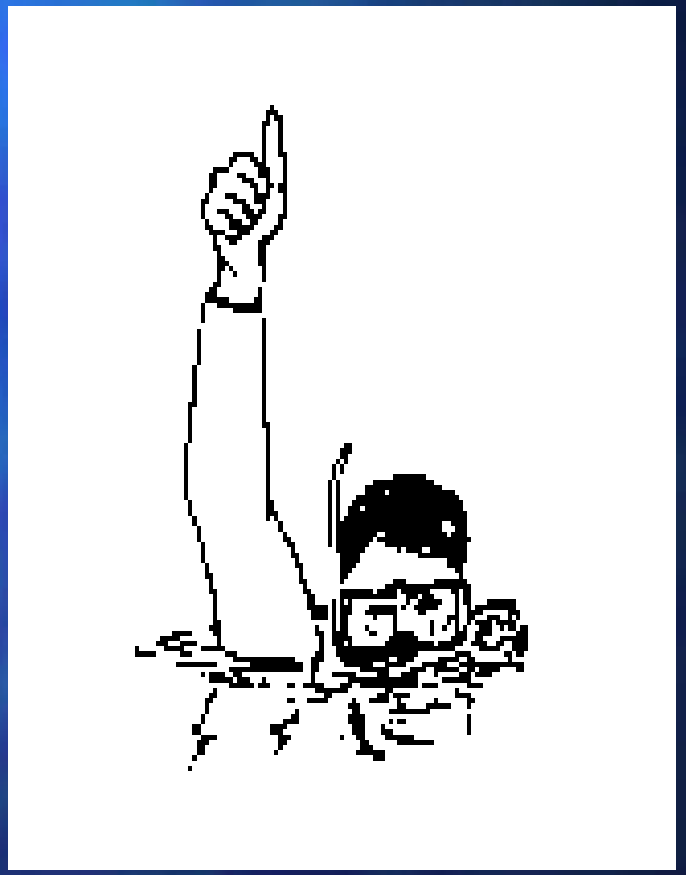
HAND SIGNALS



- Deploy Rescue Net - Both arms raised, palms open, fingers extended at a 45 degree angle to the swimmer's head.

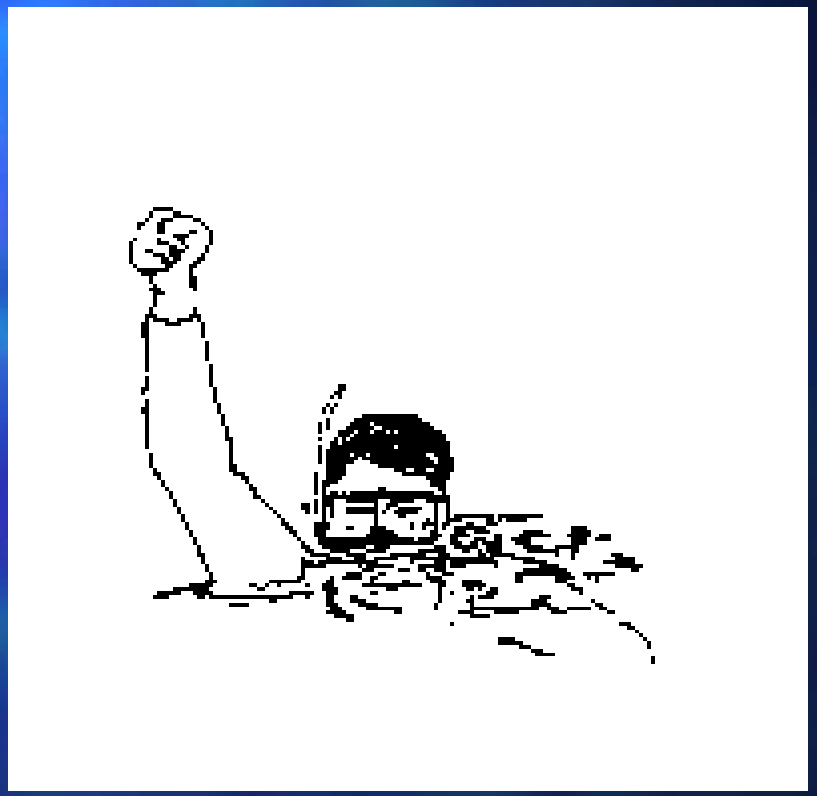
HAND SIGNALS

- Ready to be hoisted- Raised arm, thumb up.



HAND SIGNALS

- Stop Hoisting - Raised arm, clenched fist.



HAND SIGNALS

- Lower Cable - Raised arm, thumb down.

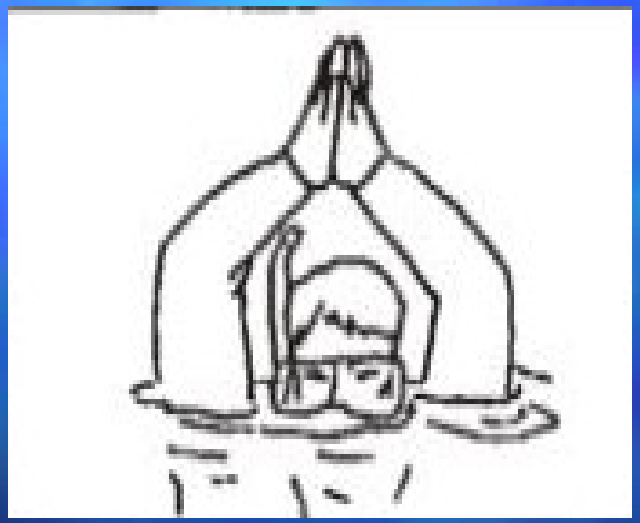
HAND SIGNALS

- Deploy Personal Flotation Device - Either hand palm down on crown of head.

HAND SIGNALS

- Request Assistance of Additional Rescue Swimmer - Either arm out, palm down, rotating in circular motion.

HAND SIGNALS



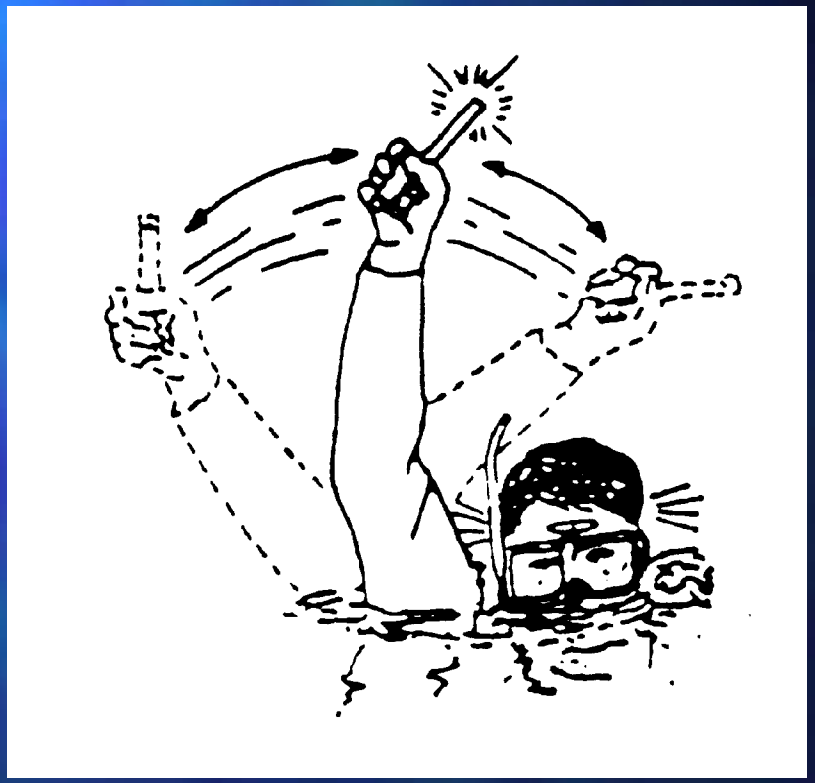
- Request Rescue Boat Assistance - Both arms raised over head, palms together.

HAND SIGNALS (NIGHT)

- I'm all right (Night)- Swimmer's lighting device (chemlight) on, raised arm, palm open, fingers extended.

HAND SIGNALS (NIGHT)

- Move in for pick-up (Night)- Wave chemlight.

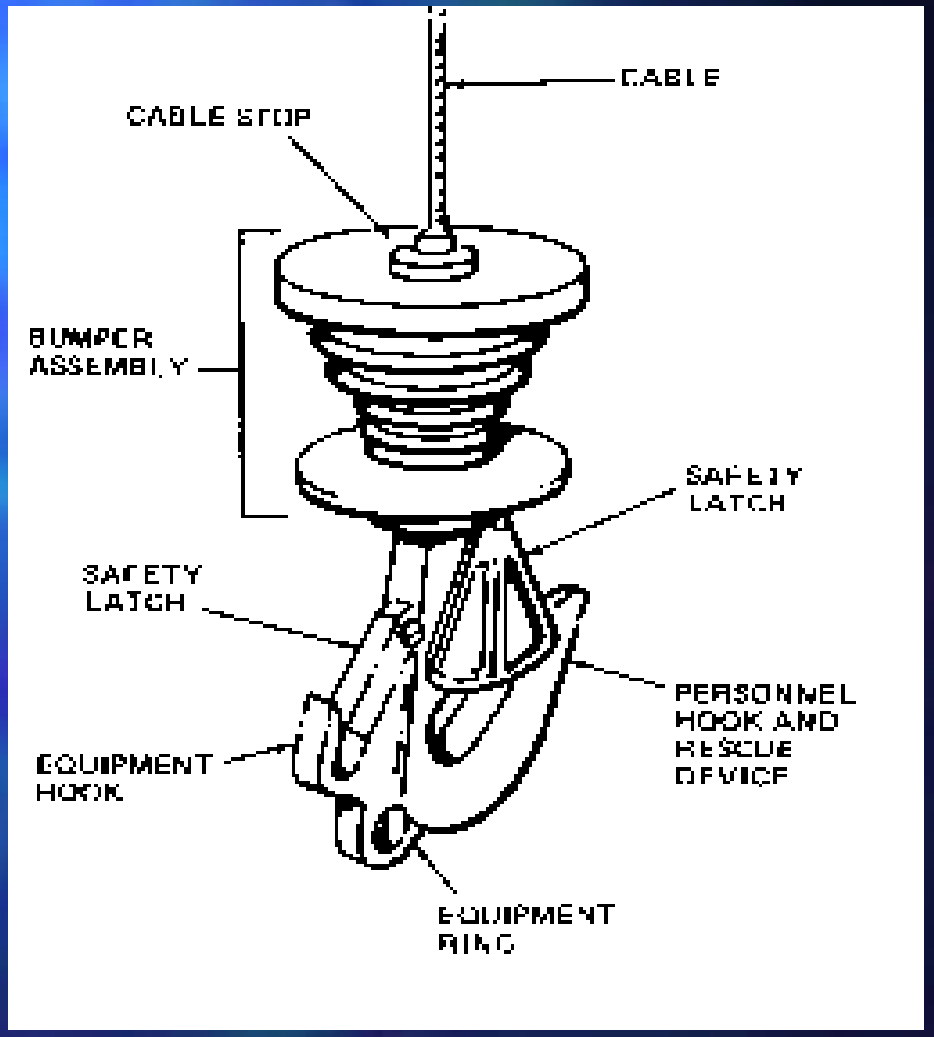


HAND SIGNALS (NIGHT)

- In trouble need assistance (Night)- Blue strobe on.

DOUBLE RESCUE HOOK

- The Double Rescue Hook is the primary rescue device.
- All other rescue devices can only be used with the Double Rescue Hook.

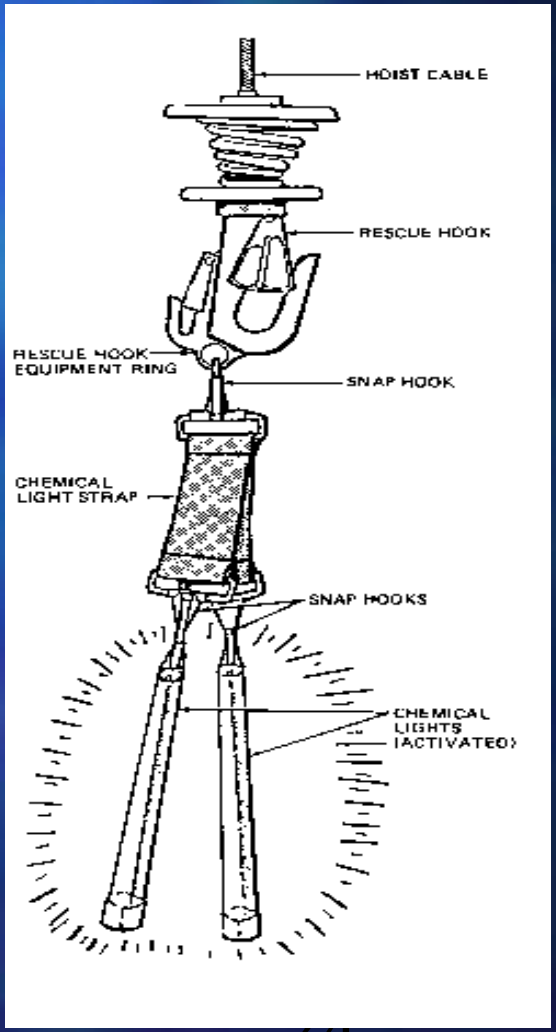


LOAD RATINGS OF THE DOUBLE RESCUE HOOK NAVAIR 13-1-6.5.

- Large hook, rated @ 3000 lbs., shall be the only hook used to hoist personnel.
- Small hook, rated @ 1000 lbs., is to be used only for lightweight items such as mail.
- The equipment ring, rated @ 1500 lbs., can be used to hoist light equipment and mail .

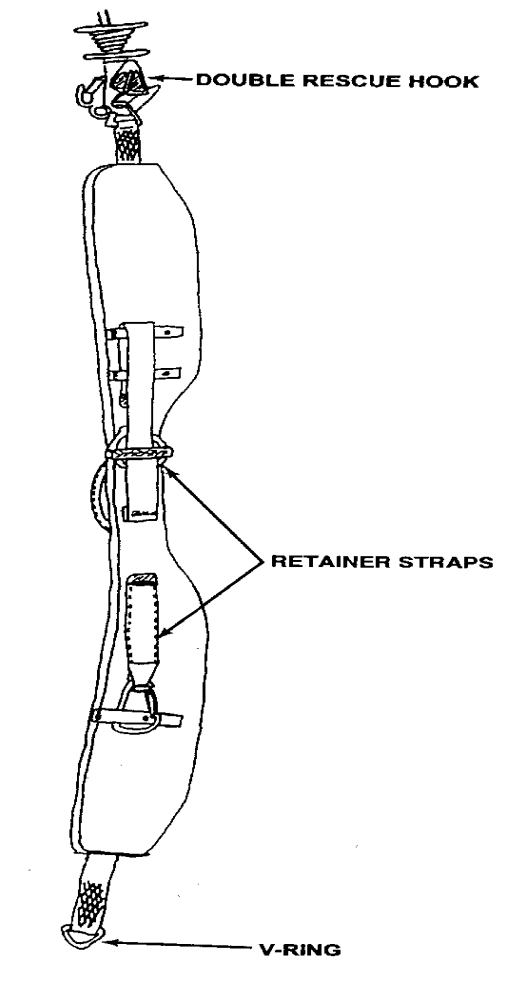
DOUBLE RESCUE HOOK

- Night time illumination
- Attach chemlight strap to equipment ring and attach two chemlights to strap.



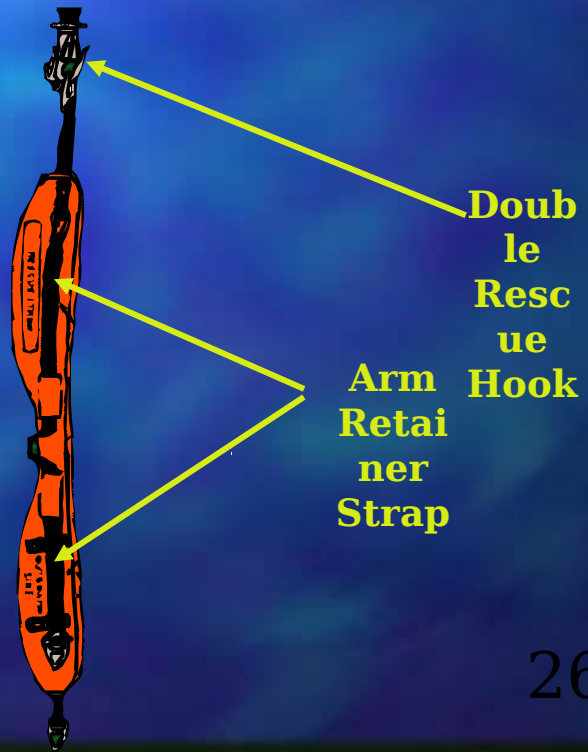
MODIFIED RESCUE STROP

- Rescue device used with Double Rescue Hook. The Modified Rescue Strop is a buoyant device with a red waterproof cover designed to accommodate one survivor.



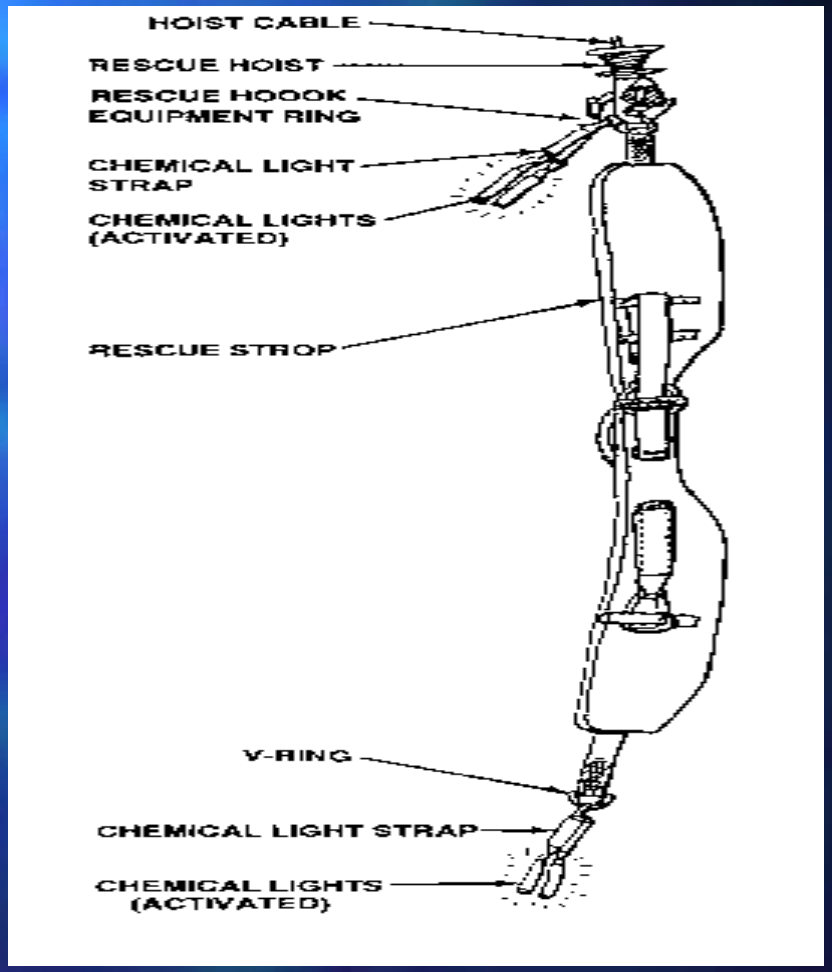
MODIFIED RESCUE STROP

- A webbing strap runs through the cover and has a “V” ring at both ends for attaching the Double Rescue Hook. Two arm retainer straps are attached on the outside to hold survivor in the strop.



MODIFIED RESCUE STROP

- Night time illumination:
  - Two chemlights are attached to the strap. Strap is attached to Rescue Strop lower “V” ring.



MODIFIED RESCUE STROP

NOTE

Arm retainer straps shall be in the stowed position when lowering the Rescue Strop.

PROCEDURES FOR MODIFIED RESCUE STROP

- Signal for pick-up.
- Once under davit, signal the swimmer signals a closed fist to stop hauling in.
- Approach hoist with survivor in an appropriate carry.
- Working behind the survivor, with arm retainer straps outboard, the Rescue Swimmer shall pass the free end of the strop under one arm, around the back and under the other arm.

MODIFIED RESCUE STROP

- Connect the Rescue Strop free end lifting “V” ring to the large hook.
- Position the Rescue Strop tightly under the survivor’s armpits and on the upper half of the survivor’s back.

Modified Rescue Strop

WARNING

Arm retainer straps shall always be used when hoisting survivor with the Rescue Strop. This prevents the survivor's arms from rising and the survivor from slipping out of the Rescue Strop.

MODIFIED RESCUE STROP

- Pass the arm retainer straps over the survivor's arms, route under the Rescue Strop and across the survivor's chest.
- Connect the snap- hook arm retainer strap to the "V" ring arm retainer strap.
- Pull webbing on the "V" ring arm retainer strap until the arm retainer straps are secured tightly around the survivor's arms.

MODIFIED RESCUE STROP

- If swimmer is to be hoisted, connect swimmer's lifting "V" ring to the large Hook.
- Perform safety check.
- Signal "Ready for Pick-up."

MODIFIED RESCUE STROP

- Rescue swimmer and survivor are hoisted up. After reaching the rescue platform, the rescue swimmer and crew shall assist the survivor.

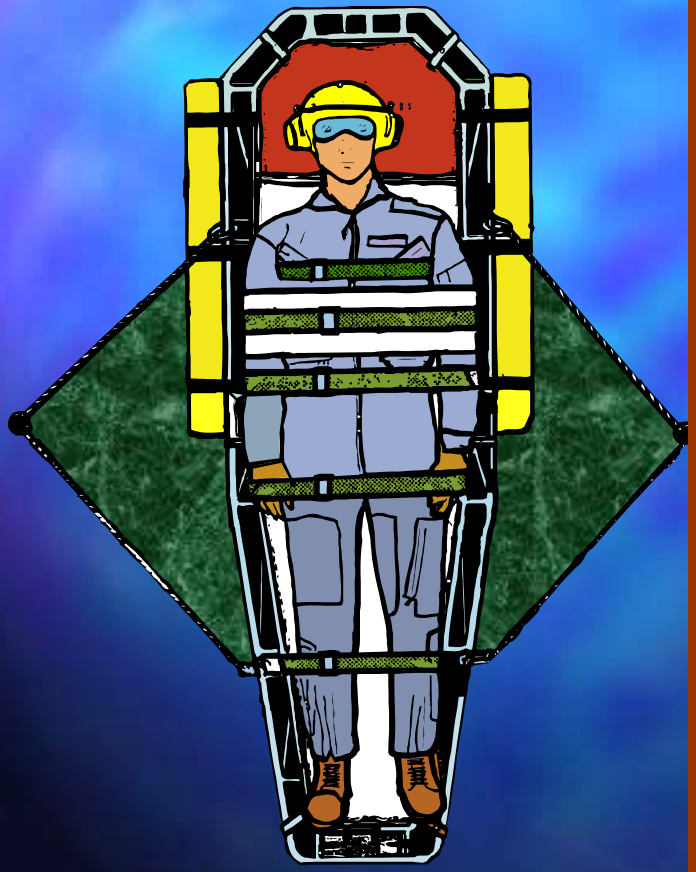
MODIFIED RESCUE STROP

- Once the survivor is inside and on the deck of the rescue platform, the rescue swimmer shall maintain positive control of the survivor until the crew gives a thumbs up. A thumbs up indicates to the rescue swimmer that the crew has the survivor in positive control on the rescue platform.

RESCUE LITTER/SAR MEDEVAC LITTER CHARACTERISTICS

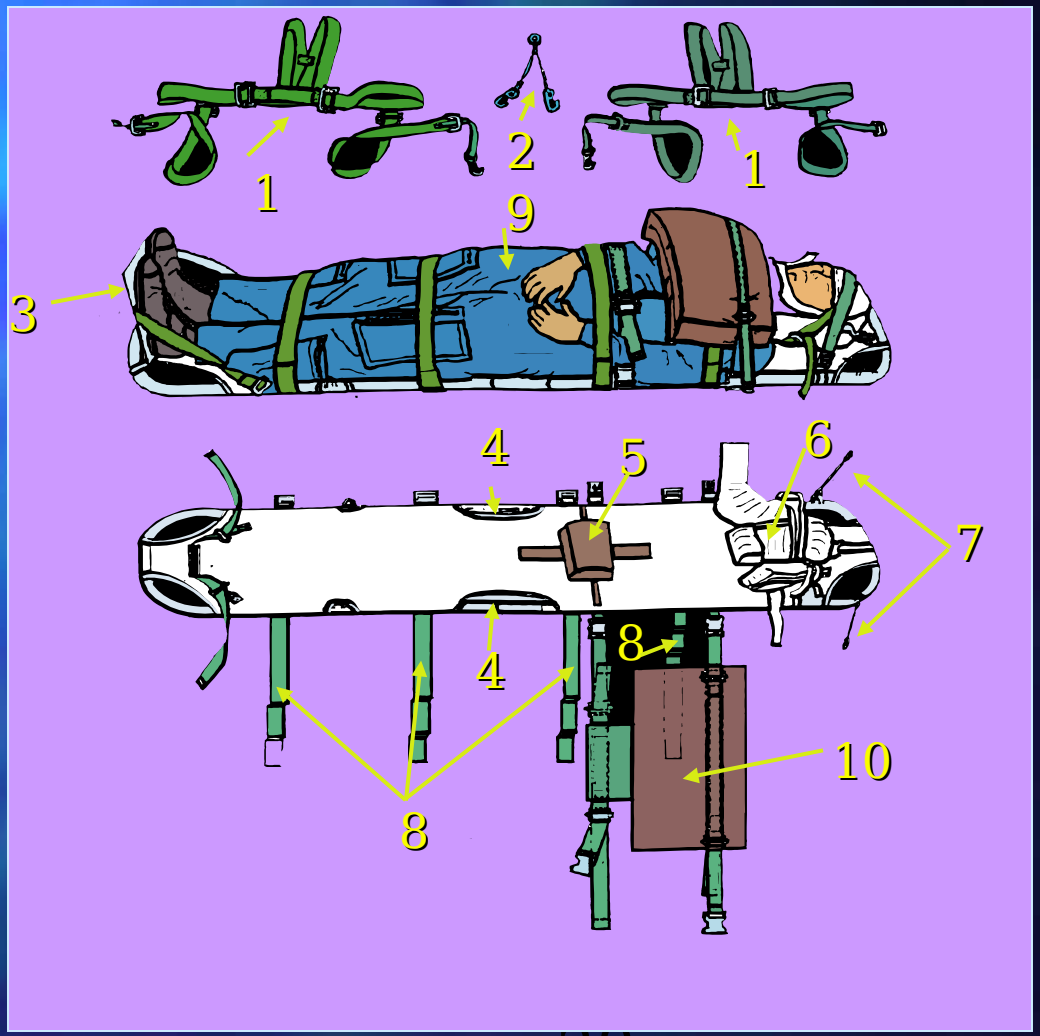
- Both are for use with suspected back injury victims and unconscious survivors.
- Both are designed to be used over land or in water with flotation assemblies.
- Rescue Litter requires a flotation kit for over water use. When flotation is installed, litter floats with survivor's head slightly reclined from the vertical.

RESCUE LITTER



SAR MEDEVAC LITTER

- 1. Adjustable Carrying Harness (2 ea.)
- 2. Vertical Hoisting Sling
- 3. Foot Restraint Assembly
- 4. Locking Couplers
- 5. Lumbar Support Pad
- 6. Head Restraint
- 7. Hoisting Connecting Cable
- 8. Patient Straps
- 9. Patient in Litter
- 10. Chest Flotation



RESCUE LITTER/SAR MEDEVAC LITTER CHARACTERISTICS

WARNING

If survivor is wearing the bright orange Quick Donning Anti-exposure Suit, it may counteract the self-righting feature of the Rescue Litter and the SAR MEDEVAC Litter.

RESCUE LITTER/SAR MEDEVAC LITTER CHARACTERISTICS

- Both have a two piece rescue litter hoisting sling, which attached to the Double Rescue Hook. Sling is color coded short red to head and long white to feet.

RESCUE LITTER/ SAR MEDEVAC LITTER CHARACTERISTICS

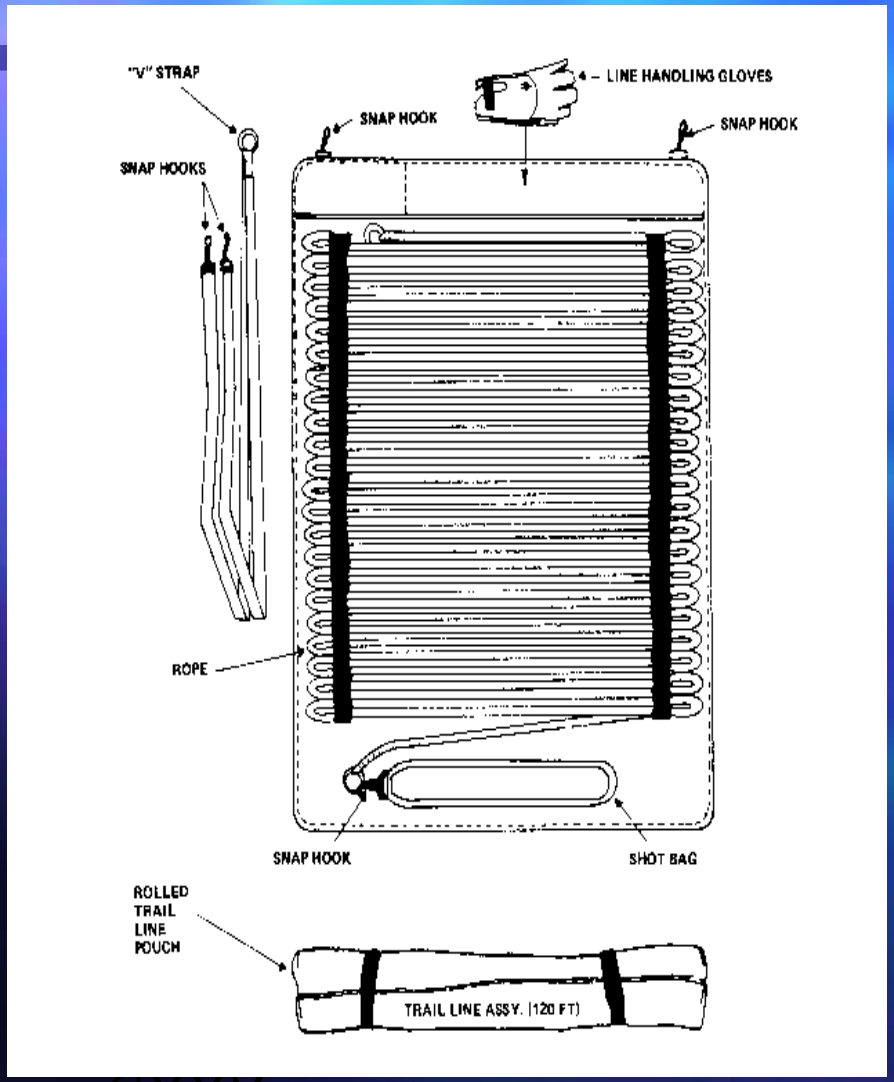
- The SAR MEDEVAC Litter folds in half and can be stored in a backpack and weighs approximately 40 lbs. It can be hoisted vertically or horizontally with its own sling, making it especially useful in restricted access situations.

SAR MEDEVAC LITTER

RESCUE LITTER/ SAR MEDEVAC LITTER CHARACTERISTICS

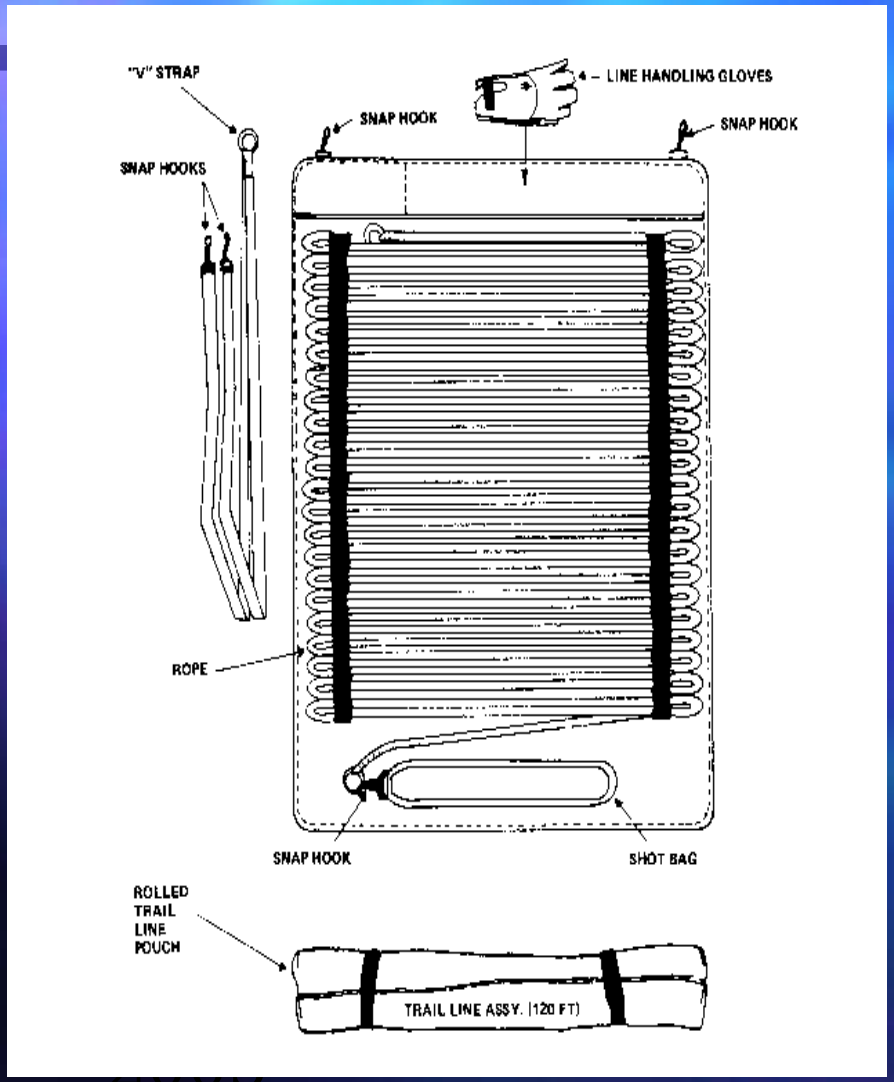
- Night time illumination:
  - Two chemlights are attached to each strap. One strap is attached to the head of the litter, one to the foot.
- Both litters utilize a "trail line" controlled by the swimmer in the water to control litter deployment, and stabilize the litter during hoisting.

TRAIL LINE ASSEMBLY



- One hundred and twenty(120') feet in length.
- Three-eighths inch thick polyethylene, diamond-braided line.

TRAIL LINE ASSEMBLY



- A weak link is incorporated, designed to break if the trail line becomes entangled.
- Gloves and line are deployed together via a 5-lb shot bag.

SECURING SURVIVOR TO THE RESCUE LITTER (STOKES LITTER)

- Rescue Litter has five restraint straps. They are stowed with four retaining straps.
- Procedure for securing survivor:
  - The rescue swimmer shall guide the survivor into the positioned litter by using the collar tow or equipment carry.

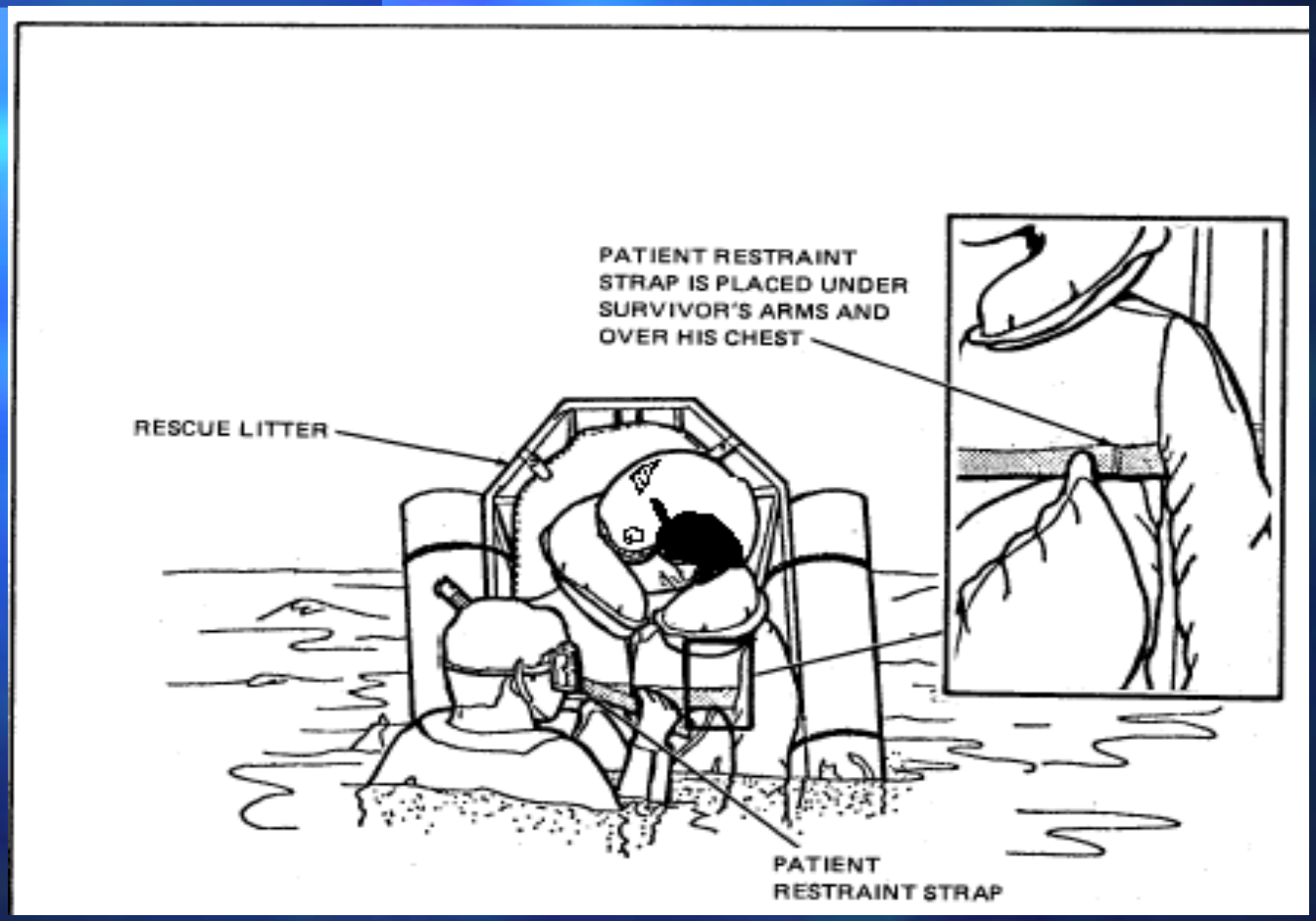
SECURING SURVIVOR TO THE RESCUE LITTER

- Once positioned, the swimmer shall the the top restraint strap from the front of the litter and secure it around the survivor's chest. The strap is pulled loose from the right side, placed under the arms but over the chest, and attached to the fitting on the left.
- Next, working from the chest strap down, secure the rest of the restraint straps.

SECURING SURVIVOR TO THE RESCUE LITTER

- Once the restraint straps are secured, attach the chest pad over the survivor's arms. The rescue swimmer may encounter some difficulty if survivor has flotation; however, flotation shall not be removed. Instead, remove chest pad from litter and continue with rescue. If practical swimmer will return chest pad back to rescue platform when hoisted.

SECURING SURVIVOR TO THE RESCUE LITTER



SECURING SURVIVOR TO THE SAR MEDEVAC LITTER

- Litter will need to be assembled by rescue platform crew prior to lowering to swimmer.
- Litter has integral cervical collar and head restraint, four survivor restraint straps, one chest flotation pad assembly strap, and one foot restraint assembly.

SECURING SURVIVOR TO THE SAR MEDEVAC LITTER

- The rescue swimmer shall guide the survivor into the positioned litter by using the collar tow or equipment carry.
- Once positioned, the swimmer shall take the top restraint strap from the front of the litter and secure it around the survivor's chest. The strap is pulled loose from the right side, placed under the arms but over the chest, and attached to the fitting on the left.

SECURING SURVIVOR TO THE SAR MEDEVAC LITTER

- Next, working from the chest strap down, secure the rest of the restraint straps.
- Properly adjust foot restraint assembly.
- Once the restraint straps are secured, attach the chest pad over survivor's arms. The rescue swimmer may encounter some difficulty if survivor has flotation; however, flotation shall not be removed. Instead, remove chest pad from litter and continue with rescue. If practical swimmer will return chest pad back to rescue platform when hoisted.
- Secure head restraint assembly if possible. Do not remove survivor's helmet if neck/back injury is suspected.

GENERAL LITTER PROCEDURES

NOTE

When the rescue swimmer reaches a distance of 20 to 25 feet from the ship he/she will signal “Stop Hauling”. The rescue swimmer shall maintain a distance of 20 to 25 feet to prevent swimmer from being battered against the ship.

GENERAL LITTER PROCEDURES

- Signal for litter. (Trail line will come out first.)

GENERAL LITTER PROCEDURES

WARNING

The weight bag shall be deployed so as not to strike rescue swimmer or survivor.

GENERAL LITTER PROCEDURES

- The rescue platform shall deploy the trail line ensuring that it is attached to the litter. The gloves shall be tied on by a slip knot located just above the weight bag.

GENERAL LITTER PROCEDURES

WARNING

The rescue swimmer shall wear trail line or authorized rescue swimmer gloves with leather palms in order to prevent rope burns to the hands.

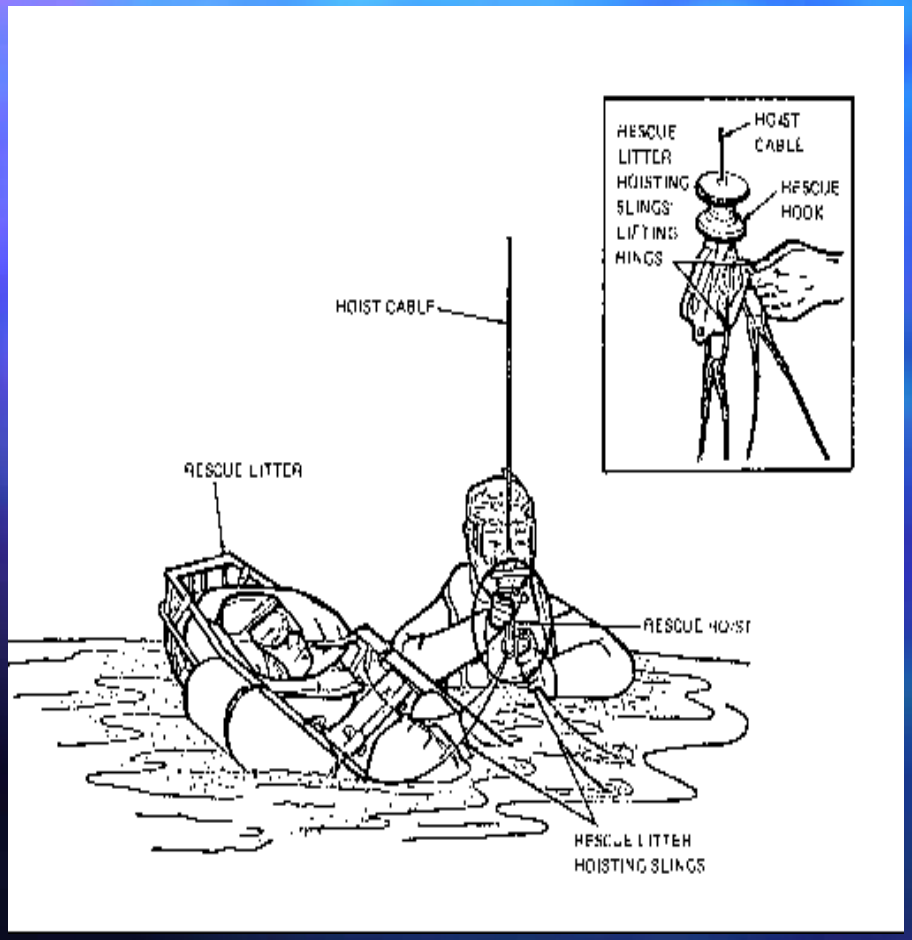
GENERAL LITTER PROCEDURES

- Put on gloves.
- The rescue swimmer shall pull on the trail line gently until the entire line is deployed.
- Signal "thumbs-up" indicating ready for litter.
- Use trail line to control the litter and pull it into position as it is lowered.
- The ship lowers the rescue litter into the water with hoisting slings attached to the rescue hook behind the litter.
- Disconnect hoisting slings from rescue hook, placing hoisting slings outside of litter. Do not allow hoisting slings to foul restraining straps.

GENERAL LITTER PROCEDURES

- Position survivor on litter, adhering to warning regarding survivor's buoyancy and the self-righting feature of the litter.
- Secure survivor using procedures appropriate to the litter.

GENERAL LITTER PROCEDURES



- Ready the Rescue Litter hoisting sling and signal the rescue platform to move in for pickup.
- Hook the Rescue Litter hoisting sling (both sides) to the large hook.

GENERAL LITTER PROCEDURES

- Conduct pre-hoisting safety check, ensuring survivor is securely within litter, litter is attached to large hook, tending line is attached to proper side of the litter (aircraft dependent), sling cables are in correct positioning, swimmer is wearing gloves, and cable is clear and not wrapped around the litter or the swimmer.
- Signal for “up-hoist”.

GENERAL LITTER PROCEDURES

NOTE

Extreme care shall be utilized during trail line evolutions in shallow waters. Cease hoisting immediately if the weighted bag becomes snagged on the bottom. Hoisting when this occurs may cause possible harm to personnel and/or equipment.

GENERAL LITTER PROCEDURES

- Swimmer remains in water, taking a slight strain on trail line, stabilizing the hoist, and keeping the litter oriented parallel to the longitudinal axis of the rescue platform. Upon reaching the rescue platform, maneuver survivor aboard per platform specific procedures.

GENERAL LITTER PROCEDURES

- With the litter and trail line on board, the crew shall lower the hoist cable and recover rescue swimmer.

SUMMARY

- True or False: The swimmer is the only one on the crew who must know his/her hand signals?

  False: All crewmembers must be familiar with the meaning of standard hand signals.

- What is the night hand signal for "move in for pickup"?

  Wave chemlight

SUMMARY

- What are the load ratings of the Double Rescue Hook?

  Large Hook: 3000 lbs

  Small Hook: 1000 lbs

  Equipment Ring: 1500 lbs

- The rescue net provides flotation for how many?

  Two (2) persons.

SUMMARY

- When stored in the backpack, how much does the SAR MEDEVAC Litter weigh?

  40
  lbs

Questions?